



DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(ENERGY, INSTALLATIONS AND ENVIRONMENT)
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MEMORANDUM FOR DEPUTY CHIEF OF NAVAL OPERATIONS
(FLEET READINESS AND LOGISTICS) (N4)
DEPUTY CHIEF OF NAVAL OPERATIONS
(WARFARE SYSTEMS) (N9)
DEPUTY COMMANDANT OF THE MARINE CORPS
(INSTALLATIONS AND LOGISTICS)
DEPUTY COMMANDANT OF THE MARINE CORPS
(AVIATION)
COMMANDER, MARINE CORPS SYSTEM COMMAND
COMMANDER, NAVAL SUPPLY SYSTEMS COMMAND
COMMANDER, US FLEET FORCES COMMAND
COMMANDER, US PACIFIC FLEET
COMMANDER, NAVY INSTALLATIONS COMMAND
COMMANDER, NAVAL SEA SYSTEMS COMMAND
COMMANDER, NAVAL AIR SYSTEMS COMMAND
COMMANDER, NAVAL FACILITIES ENGINEERING
COMMAND

SUBJECT: Additional Aqueous Film Forming Foam (AFFF) Control, Removal, and Disposal Requirements

References: (a) DASN (E) Policy Memo, "Aqueous Film Forming Foam (AFFF) Control, Removal, and Disposal," 17 June 2016
(b) Naval Sea Systems Command (NAVSEA) MIL-PRF-24385F with Amendment 2, 7 Sept 2017
(c) DoD Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1.1, Feb 2018

Per- and polyfluoroalkyl substances (PFAS) (formerly referred to as perfluorinated compounds (PFCs)) are a suite of over 1,000 chemicals, several of which are of emerging public health concern to the Department of the Navy (DON), U.S. Environmental Protection Agency (EPA), State regulatory agencies, and the general public. PFAS are widely used chemicals found in various industrial and consumer products. The most common DON activity that could potentially result in the release of PFAS to the environment is the use of aqueous film forming foam (AFFF) for testing, training, firefighting, and other life-saving emergency responses. The EPA issued a lifetime health advisory for drinking water of 70 parts per trillion (ppt) for the combined value of two PFAS (perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA)) on 19 May 2016.

Reference (a) directed the removal and disposal of uninstalled PFOS-containing AFFF in drums and cans from locally stored supplies for shore installations and ships. Reference (b) amended the military specification (MILSPEC) for AFFF to establish maximum permissible levels for PFOS and PFOA concentrations at the current limit of quantitation of 800 parts per billion (ppb) each (herein referred to as the maximum permissible levels). With the release of reference (b), DON will now move forward with additional actions related to management of AFFF and AFFF-contaminated water.

By September 2018, Naval Supply Systems Command (NAVSUP) shall coordinate with the Defense Logistics Agency and enact a method that ensures only AFFF that meets the amended MILSPEC in reference (b) is supplied to Navy and Marine Corps customers. NAVSUP shall inventory and dispose of all legacy, stored AFFF not compliant with reference (b),

This policy directs the following actions be taken by the Navy and Marine Corps for shore-side fixed and mobile systems:

- By the end of FY19, conduct testing of AFFF, as necessary, in installed systems to determine removal and disposal requirements for product in exceedance of the MILSPEC amendment's maximum permissible levels for PFOS and/or PFOA. Installed AFFF known to exceed the maximum permissible levels for PFOS and/or PFOA need not be tested to support removal and disposal. Additionally, identify and segregate all remaining uninstalled AFFF not meeting the amended MILSPEC in reference (b).
- Testing of AFFF product and AFFF-contaminated water shall be conducted in accordance with the analytical requirements stipulated in reference (b) using a laboratory that is accredited by the Department of Defense (DoD) Environmental Laboratory Accreditation Program (ELAP). This accreditation must include the ability to test for PFOS and PFOA in AFFF concentrate in accordance with the requirements of DoD Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.1.1, Appendix B, Table B-15 (reference c). Laboratories and methods certified under prior drinking water regulations or policies are neither appropriate nor valid for this effort. Where testing identifies concentrations greater than maximum permissible levels, an action plan for removal, disposal, and replacement shall be developed. Records of all testing results and replacement actions shall be maintained by the system owner.
- By the end of FY20, remove, dispose, and replace installed and uninstalled AFFF that does not meet the maximum permissible limits in reference (b). Prioritization of removal efforts should begin with mobile equipment and then take into consideration a fixed system's ability to contain AFFF releases as well as the levels of PFOS and PFOA in each system. Undiluted AFFF product must be disposed using incineration.
- Installed systems that have product removed as a result of testing must be triple rinsed to remove residual PFOS and PFOA concentrations. If research and development projects provide quantified data to support a reduction in the number of rinse cycles necessary or other equivalent methods to reduce residual concentrations, this requirement may be waived via amendment to this policy.
- AFFF-contaminated water shall be treated and disposed using granular activated carbon treatment (preferred method), solidification/landfill, or incineration. Other best available


disposal technology can be used if it can be shown to be at least as protective as the approved technologies. If concentrations of PFOS and PFOA (combined) in AFFF-contaminated water can be treated to levels less than or equal to 70 ppt, the water can be discharged to a sanitary system in accordance with any State/local/overseas regulations, associated permits, and any other site-specific requirements.

- As instructed in reference (a), non-emergency operations, when deemed necessary, must include mechanisms and procedures for complete containment, capture, and proper disposal to ensure no AFFF is released to the environment. Additionally, this policy encourages the use, when feasible, of system testing procedures and equipment that avoid the use of AFFF.

All AFFF replacement products purchased must be listed on the qualified product list (QPL). Testing to date has identified that manufacturer's material on QPL-24385 with a manufacturing date of December 2016 or later meets the maximum permissible levels identified in reference (b) and can be utilized.

The above actions are vitally important to ensure all personnel and their families who live or work on DON installations and facilities are protected from environmental contaminants. Replacing legacy AFFF and containing future releases demonstrates DON's commitment to environmental stewardship, safe drinking water for adjacent communities, and proactive response to emerging contaminants.

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